

R E M A R K S

Independent claims 1, 35 and 36 have been formally amended in an effort to define the claimed subject matter more precisely by explicitly stating that the immediately adjacent reaction chambers 6 are separated by **common** wall 5. While this is implied by the recitation "**immediately** adjacent," it makes this limitation explicit in structural terms. The basis for this added language is found, for example, on page 20, penultimate line, and page 24, line 14. Also, while maximizing the number of reaction chambers in the reaction vessel is the necessary result of the claimed configuration and, therefore, is implied in the claimed structure, this result has now been explicitly set forth in the claims, to take into account the Examiner's comment "that the features upon which applicant relies (i.e. more reaction chamber per area) are not recited in the rejected claims."

If applied to formally amended claims 1, 35 and 36, the rejection under 35 U.S.C. 103(a) as being unpatentable over Kim et al, acknowledged by applicants as prior art, is respectfully traversed. Kim et al disclose a **central** reservoir 28 in communication with at least one reaction area. Each reaction area communicates directly or indirectly with the central reservoir through a diffusion channel 30. The central

reservoir, the reaction areas and the diffusion channels of each crystallization unit are open on top, and a tabbed cover slip is placed over the unit (col. 3, lines 46-63). In the preferred embodiment (col. 6, lines 8-10), four reaction areas are arranged around the central reservoir. Kim et al also note that the geometric arrangement of the reaction areas around the central reservoir may be varied, i.e. it may be triangular. Col. 6, line 32-36, states "that central reservoir 32' may be divided into four equal sections 58 by dividers 60," in which case each central reservoir is connected to a reaction area by diffusion channel 30'.

The object of the claimed invention has been summarized on page 5 of the specification, i.e. to provide a reaction vessel for producing a crystal, which enables a plurality of production processes with different process parameters to be operated with high efficiency.

This object has been accomplished by applicants by disposing the reservoirs and the reaction areas co-operating therewith **immediately** adjacent each other and distributed in an identical manner, the reservoirs and co-operating reaction areas being in **each** reaction chamber, **not** a **central** reservoir with reaction areas arranged thereabout. The **immediate** adjacency has been emphasized in the amended claims by pointing

out that the immediately adjacent reaction chamber are separated by a **common** wall. In this claimed configuration of the reaction vessel, the entire base area of the reaction vessel is covered by the reaction chambers, except for the minor areas covered by separation walls 5. In this way, the number of reaction chambers per reaction vessel is maximized.

While it is known from Kim et al to arrange reservoirs and reaction areas in parallel rows and geometric variations of the arrangement around the central reservoir are described, there is no suggestion of arranging the reaction chambers immediately adjacent each other in immediately adjacent, parallel rows. In Kim et al's described and illustrated embodiments, the distance between adjacent reservoirs is always larger than the diameter of the reservoir. To arrange them **immediately** adjacent and separated by a **common** wall is neither suggested by Kim et al, nor obvious from their disclosure to a person of ordinary skill in the art. As a matter of fact, the positioning of the drop chambers (reaction areas) about a **central** reservoir is actually contrary to the claimed structure and makes the claimed geometric arrangement impossible. Accordingly, claim 1 is respectfully submitted to the patentable over Kim et al.

The same arguments apply to claim 35. The arrangement of reaction chambers in the form of prism disposed in a honeycomb

arrangement necessarily means that the reactions chambers are **immediately** adjacent each other and separated by a **common** wall, making a **honeycomb** structure.

As to claim 36, the previous arguments apply to it, too, in addition to which, Kim et al do not suggest at least one other reaction area above the reservoir in a reaction vessel having the structure set forth in the claim. In Kim et al, all the reaction areas are in communication with the central reservoir by a diffusion channel, thus excluding a reaction area **above** the reservoir.

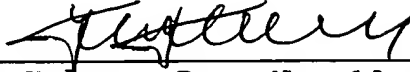
The dependent claims are believed to be allowable with the claims whereon they depend.

Claims 39-52 are withdrawn from consideration herein, the right to file a divisional application directed to the non-elected subject matter having been reserved.

A sincere effort having been made to overcome all grounds of rejection, favorable reconsideration and allowance of claims 1-3, 5-36 and 38 are respectfully solicited.

Respectfully submitted,

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Enclosure: Marked-up copy of changes

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Marked-up copy of amended claims

Amend amended claim 1 to read as follows:--

1 (twice amended). Reaction vessel for producing a crystal from a substance in liquid form or in solution, comprising at least one housing part ~~and~~ having several reaction chambers, each forming a separate gas chamber, and each reaction chamber having a reservoir and several reaction areas co-operating therewith, the reaction areas being connected to one another and to the reservoir in order to exchange gas, the reservoirs and the reaction areas co-operating therewith being disposed immediately adjacent to one another in immediately adjacent, parallel rows and distributed in an identical manner, ~~these rows running parallel with one another, and~~ each row of reservoirs co-operating with a row of reaction areas, and the immediately adjacent reservoirs and the reaction areas cooperating therewith being separated by a common wall, whereby the number of reaction chambers in the reaction vessel is maximized.

Amend claim 35 to read as follows: --

35 (twice amended). Reaction vessel for producing a crystal from a substance in solution or in liquid form, comprising at least one housing part ~~and~~ having several reaction chambers, each forming a separate gas chamber, and each reaction chamber housing a reservoir and several reaction areas co-operating therewith, the reaction areas being connected to one another and to the reservoir in order to exchange gas, the reaction chambers being in the form of prisms with a regular hexagonal base surface and being disposed in a honeycomb arrangement, adjacent ones of the reaction chambers

being separated by a common wall whereby the number of reaction chambers in the reaction vessel is maximized.

Amend claim 36 to read as follows:--

36 (amended). Reaction vessel comprising ~~at least~~ a vessel bottom part with a vessel floor and vessel walls forming ~~at least one~~ several reaction chambers, ~~the~~ each reaction chamber having a reservoir for liquid agents and at least one reaction area separated from the reservoir and having a gas connection thereto, ~~characterised in that the reaction chamber is covered by~~ adjacent ones of the reaction chambers being separated by a common vessel wall, whereby the number of reaction chambers in the reaction vessel is maximized; a vessel top part, which lies ~~at least~~ against the vessel walls, optionally with a sealing layer in between, covering the reaction chambers; and ~~having~~ at least another reaction area above the reservoir.